

What is claimed is:

1. A computerized system embodied in a computer readable medium for modifying a target software application segmented into first version grains, comprising:

5 a set of computer readable instructions embodied in said computer readable medium for:

receiving a hot pack having a dictum and a second version grain associated with at least one of said first version grains,

opening said hot pack,

10 suspending said target software application,

determining the status of said dictum,

modifying at least one of said first version grains of said target software application according to said second version grain and said dictum of said hot pack if said determination of said status of said dictum allows for its immediate modification,

15 and,

resuming execution of said target application so that modification of said target software application is achieved without halting its execution.

2. The system of claim 1 wherein said computer readable instructions include instructions for triggering performance of a validity operation according to said dictum so that data and functional integrity is maintained within said target software application subsequent modification of said target software application.

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3. The system of claim 1 wherein said computer readable instructions include instructions for:

resizing the address space of said target software application according to said hot pack, and,

5 copying said second version grain within said address space of said target software application.

4. The system of claim 1 wherein said computer readable instructions include instructions for:

10 resizing the address space of said target software application according to said hot pack; and,

copying said dictum into said address space of said target software application.

5. The system of claim 1 wherein:

at least one crumb associated with at least one of said first version grains having an active and inactive state; and,

15 said computer readable instructions include instructions for activating said associated crumbs upon the determination that said status of said dictum associated with said first version grain does not allow for its immediate execution.

6. The system of claim 5 wherein said computer readable instructions include instructions for, when encountering said crumb in an active state:

20 suspending said executing software application;

determining whether said dictum associated with said active crumb can be executed;

modifying said first version grain according to said second version grain and said dictum if said determination of whether said dictum can be executed is affirmative, and,

resuming execution of said target software application so that said target application is modified without halting its execution.

7. The system of claim 6 wherein said computer readable instructions include instruction for adding at least one crumb to at least one of said first version grains that are to be modified according to said hot pack.

8. A computerized system embodied within a computer readable medium for modification of an executing target software application, having first version grains, comprising:

a hot pack contained within said computer readable medium;

a second version grain contained within said hot pack;

a dictum associated with at least one of said first version grains contained within said hot pack for providing instructions for modification of at least one of said first version grains according to said dictum and said second version grain;

a set of computer readable instructions embodied within said computer readable medium for:

suspending said target software application,

modifying at least one of said first version grains according to said second version grain and said dictum, and,

resuming execution of said target software application so that said target software application is modified without halting its execution.

9. The system of claim 8 wherein said computer readable instructions include instructions for triggering performance of a validity operation according to said dictum so that data and functional integrity is maintained within said target software application subsequent to modification of said target software application.

10. The system of claim 8 wherein said computer readable instructions include instructions for:

resizing the address space of said target software application according to said hot pack; and,

copying said second version grain to within said resized address space of said target software application.

11. The system of claim 8 wherein said computer readable instructions Include instructions for:

resizing the address space if said target software application according to said hot pack; and,

copying said dictum into said address space of said target application.

12. The system of claim 8 wherein:

at least one crumb associated with at least one of said first version grains having an active and inactive state; and,

said computer readable instructions include instructions for activating said crumb upon the determination that said status of said dictum associated with said first grain to be modified does not allow for its immediate modification.

13. The system of claim 12 wherein said computer readable instructions  
5 include instructions for when encountering said crumb in said active state:

suspending said executing software application;

determining whether said dictum in turn associated with said first grain  
associated with said active crumb can be modified;

modifying said first version grain according to said second version grain and  
10 said dictum if said determination of whether said first version grain can be modified is  
affirmative; and,

resuming execution of said target software application so that said target  
application can be modified without halting its execution.

14. A computerized system embodied within a computer readable medium  
15 for modification of an executing target software application having first version grains  
comprising:

a hot pack contained within said computer readable medium;

a second version grain contained within said hot pack;

a dictum associated with at least one of said first version grains contained  
20 within said hot pack for providing instructions for modification of at least one of said  
first version grains according to said dictum;

a means for suspending said target software application;

a means for modifying at least one of said first version grains according to said second version grain and said dictum; and,

a means for resuming execution of said target software application so that said target software application is modified without halting its execution.

5           15.    The system of claim 14 including a means for performing a validity operation according to said dictum so that data and functional integrity is maintained within said target software application subsequent modification of said target software application.

16.    The system of claim 14 including:

10           a means for resizing said target application's address space according to said hot pack; and,

a means for copying said second version grain to within said resized address space of said target software application.

15           17.    The system of claim 16 including a means for copying said dictum into said address space of said target application.

18.    The system of claim 14 including:

at least one crumb associated with at least one of said first version grains having an active and inactive state;

20           a means for determining whether said dictum associated with at least one of said first version grains can be activated;

a means for activating said crumb upon the determination that said status of said dictum does not allow for its immediate modification.

19. The system of claim 18 including:

a means for determining whether active crumb is encountered;

a means for suspending said executing software application upon encountering said active crumb;

5 a means for determining whether said dictum associated with said active crumb can be modified according to said dictum;

a means for modifying said first version grain according to said second version grain and said dictum if said determination of whether said dictum can be executed is affirmative; and,

10 a means for resuming execution of said target software application so that said target application can be modified without halting its execution.

20. A method for modifying a target software application segmented into first version grains with each of the first version grains having associated crumbs with the associated crumbs having an active and inactive state, comprising the steps of:

15 providing a hot pack having a dictum and a second version grain,  
suspending said target software application,  
determining the status of said dictum;

modifying at least one of said first version grains of said target software application according to said second version grain and said dictum of said hot pack if  
20 said determination of said status of said dictum allows for its immediate modification,  
and,

resuming execution of said target application so that modification of said target software application is achieved without halting its execution.

21. The system of claim 20 including the steps of performing a validity operation associated with said dictum so that data and functional integrity is maintained within said target software application subsequent modification of said target software application.

22. The system of claim 20 including the steps of:  
resizing the address space of said target software application according to said hot pack; and,  
10 copying said second version grain within said address space of said target software application.

23. The system of claim 20 including the steps of:  
Resizing the address space of said target software application according to said hot pack; and,  
15 copying said dictum into said address space of said target software application.

24. The system of claim 20 including the steps of:  
providing at least one crumb associated with at least one of said first version grains having an active and inactive state; and,  
activating said crumb upon the determination that said dictum associated with  
20 at least one of said first version grains does not allow for its immediate execution.

25. The system of claim 24 including upon resumption of execution:  
suspending said executing software application;



determining whether said dictum associated with said first version grain can be modified upon encountering said active grain;

modifying said first version grain according to said second version grain and said dictum if said determination of whether said dictum can be executed is

5 affirmative; and,

resuming execution of said target software application so that said target application can be modified without halting its execution.

26. A computerized system embodied in a computer readable medium for modifying a target software application segmented into first version grains having associated crumbs, comprising:

10 a set of computer readable instructions embodied in said computer readable medium for:

receiving a hot pack having a plurality of dictums and plurality of second version grains encountered with said first version grains,

15 opening said hot pack,

suspending said target software application,

determining the status of said plurality of dictums to discover whether any of said dictums can be immediately executed,

20 modifying said first version grain associated with said dictum that can be immediately executed, and,

resuming execution of said target application so that modification of said target software application is achieved without halting its execution.

27. The system of claim 26 wherein said computer readable instructions include instructions for triggering performance of a validity operation according to said dictums so that data and functional integrity is maintained within said target software application subsequent modification of said target software application.

5 28. The system of claim 26 wherein said computer readable instructions include instructions for:

resizing the address space of said target software application according to said hot pack, and,

10 copying said second version grains within said address space of said target software application.

29. The system of claim 26 wherein said computer readable instructions include instructions for:

resizing the address space of said target software application according to said hot pack; and,

15 copying said plurality of dictums into said address space of said target software application.

30. The system of claim 26 including:

at least one grain associated with at least one of said first version grains having an active and inactive state; and,

20 said computer readable instructions include instructions for activating said crumb upon the determination that said status of said dictum associated with at least one of said first version grains does not allow for its immediate modification.

31. The system of claim 30 wherein said computer readable instructions include instructions for when encountering said crumb in an active state:

suspending said executing software application;

determining whether any of said plurality of dictums previously unexecuted can

5 be executed,

modifying said first version grains according to said second version grains and said associated dictum if said determination of whether said dictum can be executed is affirmative, and,

10 resuming execution of said target software application so that said target application can be modified without halting its execution.

32. A computerized system embodied in a computer readable medium for modifying a target software application segmented into first version grains, comprising:

15 a set of computer readable instructions embodied in said computer readable medium for:

receiving a hot pack having a dictum and a second version grain associated with at least one of said first version grains,

suspending said target software application,

20 modifying at least one of said first version grains of said target software application according to said second version grain and said dictum of said hot pack, and,

resuming execution of said target application so that modification of said target software application is achieved without halting its execution.

33. The system of claim 32 wherein said computer readable instructions include instructions for triggering performance of a validity operation according to said dictum so that data and functional integrity is maintained within said target software application subsequent modification of said target software application.

34. The system of claim 32 wherein said computer readable instructions include instructions for copying said second version grain into said computer readable medium.

35. The system of claim 32 wherein said computer readable instructions include instructions for copying said dictum into said computer readable medium.

36. The system of claim 32 including:  
at least one crumb associated with at least one of said first version grains having an active and inactive state; and,

said computer readable instructions include instructions for activating said associated crumbs upon the determination that said dictum associated with said first version grain does not allow for its execution at a predetermined time.

37. The system of claim 36 wherein said computer readable instructions include instructions for, when encountering said crumb in an active state:

suspending said executing software application;  
determining whether said dictum associated with said active crumb can be executed;

modifying said first version grain according to said second version grain and said dictum if said determination of whether said dictum can be executed is affirmative, and,

resuming execution of said target software application so that said target application is modified without halting its execution.

38. The system of claim 37 wherein said computer readable instructions include instruction for adding at least one crumb to at least one of said first version grains that are to be modified according to said hot pack.